

# ES400 OPERATING SYSTEM-BSP 03.44.0004 - UPDATE LOADER IMAGE RELEASE NOTES

## INTRODUCTION

This package contains the v03.44.0000 OS image for the ES405B terminals which are running with WEHH 6.5.3 operating system. This image supersedes the previous BSP41.0400 image and older images. Files installed in the "Application" folder and the "hidden partition" will be erased.

## DESCRIPTION

The 405Bw65XenUL034400.zip / 405Bw65XenAB034400.apf contains an Update Loader package and AirBeam package to load the 03.44.0000 OS image onto the terminal.

1. AKU 5.3.29128 (Build 29128.5.3.12.16)
2. Fusion Software H\_3.40.0.1.057R
3. AirBEAM Client v7.08.42
4. RD Client v 7.08.42

## CONTENTS

1. 405Bw65XenUL034400.zip / 405Bw65XenAB034400.apf
  - partition.mbn - Partition Table
  - Pkgs.lst - Images list installed through update loader
  - StartUpLdr.exe - Launch update loader
  - modem.smb - Modem Firmware
  - FLASH.bin - Windows Mobile 6.5 Image
  - CleanAppl.bin - Clean application to erase the application folder.



## **Bugs Fixed/Changes from OS image 41.400**

The following features were either not included in the original release or were part of a point release. Additional high level changes are listed as well.

### **General Stability/Exceptions/ Crashes/Lockups**

- SPR22489 - Resolved charging issue seen with newer VIVO carrier SIM cards when device was completely powered off.

### **WLAN**

- Updated WLAN driver version: Fusion H\_3.40.0.1.057R

### **WAN**

- Updated Qualcomm base code version to 320506Ep
- Issues seen on some carriers due to compatibility with cell broadcast have been resolved. Cell Broadcast is defaulted to on in this release.
- SPR22839 - Resolved an issue seen with devices attached to the Verizon network (activated on Verizon or unactivated in CDMA mode and attached to Verizon) where the device in rare cases would reboot following a suspend.
- SPR23190 - Resolved an issue when using a Bouqueys SIM card and calling the OpenNetCF API LoadLastDialedCallList().

### **GPS**

- SPR22532 - Resolved an issue seen when multiple applications were simultaneously accessing the GPS while the device was remaining stationary for long periods in a very weak GPS signal environment such as next to a window. Note the issue was not seen when the device was in good coverage or completely out of coverage and not at all if only one application was using the GPS.

### **Other Changes**

- SPR22206/21305 - Resolved an issue where the green and red phone keys sent two keyboard messages when they were pressed once. This affected certain third party applications that were hooking into the green and red phone keys.
- SPR20861 - Microsoft resolved an issue on Japanese language builds where the MS P Gothic font did not display correctly when rotated 90 degrees.
- SPR20773 - Resolved an issue seen on the ES400 when it was completely powered off while in a VCH4000-100R vehicle cradle, it would turn back on when power was removed from the cradle.

- SPR21178 - Resolved an issue whereby the shutdown menu would become unreadable after placing custom printer fonts in the "\\Windows\\fonts" directory.
- SPR22683 - Added ability to use the side camera button for taking pictures when the camera application is switched to the Microsoft camera application "pimg.exe".
- SPR20995 - Resolved an issue where the correct state was not returned via the GetkeyStateEx API when pressing the blue function key.
- SPR21897 - Resolved an issue where the EXIF camera time/date for pictures (available with Arcsoft camera application only) was only correct if the device had successfully synced its clock with a WAN carrier connection.
- SPR22341 - Resolved an issue whereby if multiple keys were pressed while the device was locked, the input was buffered and the entries would appear after unlocking the device.
- SPR22232 - Resolved an issue seen with the camera flash setting after changing the camera application from the default Arcsoft application to the Microsoft "pimg.exe" camera application.
- SPR22773 - Resolved an issue seen on a custom XML provisioned device with a private APN network whereby the connection would switch to CDMA after the SIM card was removed.
- SPR21619 - Resolved an issue on Japanese language builds where the word "Favorite" was not correct due to a font issue.
- SPR20095 - Resolved an issue when a wired headset is connected to the device where the ringtone would only be heard through the headset and not from the main speaker.
- SPR21146 - Disabled the random popup for the Microsoft Customer Experience Improvement program.
- Increased the maximum size for AT&T MMS messages to 600KB

## Features

- Microsoft - Windows Embedded Handheld - AKU 6.5.3.12.16 Build 29128
- Added ability to lock device on screen timeout without password using the following registry key

HKEY\_LOCAL\_MACHINE\Comm\Security\LASSD (DWORD) EnableAutoLock = 1

- IE Kiosk mode
- Kiosk mode in Internet Explorer Mobile 6 can be enabled by creating a DeviceKioskMode DWORD value under HKCU\Software\Microsoft\Internet Explorer\Main and setting the value to 1 (Hexadecimal).

By using this registry setting, kiosk mode is enabled as follows:

- The address bar is not visible
- The tap-and-hold popup menu is disabled
- The zoom slider is disabled

If the SIP is enabled, the menu bar is still enabled in kiosk mode, but only the software input panel is active. The Start and Close buttons can be removed from the menu bar by using the following registry entries under the

HKEY\_LOCAL\_MACHINE\Software\Microsoft\Shell\BubbleTiles key:

- (DWORD) HardwareStartKeyEnabled = 1
- (DWORD) HardwareDoneKeyEnabled = 1 You must restart your hardware for the registry changes to take effect.
- Added ability to not display characters during password entry by using the following registry Key: [HKEY\_LOCAL\_MACHINE\System\GWE\EDIT]

"MASKPASSWORD"=dword:00000001

o When the value of MASKPASSWORD is set to 1, the password character will be masked immediately; otherwise, the password character will be displayed momentarily

- Microsoft has removed/deprecated the "My Phone" application.
- Microsoft has removed/deprecated the "Marketplace" application.
- Microsoft has removed/deprecated the "Bing" application.
- Resolved issue: Remote Desktop Mobile session is sometimes obscured by an overlay of grid lines.

- The following Russian cities have been added to "Clocks and Alarms":
  - Kaliningrad (GMT+3), Novosibirsk (GMT+7), and Irkutsk (GMT+9) have been added to the Time Zone list.
- Integrated Datalight's FlashFX flash file system driver to replace the Microsoft flash file system driver.[same as 02.41.0400]
- Enterprise Dialer version 4.0.9
  - SPR22266 - For devices on CDMA carriers added the option to disable the hold line similar to the already existing option when GSM carriers are used.
  - Added time of call to call history for calls older than the current day.
- MSP and RD client updated to version 7.08.42
- Emscript logging and diagnostic tool has been updated to version 1.3.0
- The RT\_Log will be written to a file in \ExportsLogs\Logs upon every boot. The previous log will be overwritten.
- Warm boot option added to shutdown menu popup seen when holding down the power button for 3 seconds
- Added two alternative methods to disable the WAN preferred carrier applet.
  - If the following registry setting is used, the WAN preferred carrier applet will not run when a SIM is inserted or when a different carrier SIM is inserted in the device:  
[HKEY\_LOCAL\_MACHINE\SOFTWARE\Symbol\WWANService]  
"EnableAutoNetworkSelection"=dword:0
  - Alternatively, the applet can also be disabled by adding a file named "DisableAutoNetworkSelection" to the root of an SD card. This would be a file with no contents and no file name extension.
- Added the ability to warm boot with a long press of the Power Button. Holding down the power button continuously for 6 seconds will initiate a Warm Boot of the device. This is controlled via the following registry key:  
  
[HKEY\_LOCAL\_MACHINE\Drivers\BuiltIn\remkeys] "WarmBootTimer" = dword:6  
"LaunchShutdownOnPwrKeyHeld" = dword:1
  - If the value of "WarmBootTimer" is set to <= 3, then this feature will be disabled.
  - If the value of "LaunchShutdownOnPwrKeyHeld" is set to 0, then pressing power button continuously for more than 6 seconds would reset the device without the shutdown menu options screen being displayed.

**Note:**

- The OS update package includes "Clean Application Folder" command in the installation package. It is advised to keep this included in the pkgs.lst to reformat the application folder to delete any earlier hotfixes which are not needed on this new release.
- When updating to or from a build containing the Datalight FlashFX flash file system and going to or coming from a build containing the Microsoft flash file system, the device will perform a Clean Application regardless of whether the update folder contains the CleanAppl command as the device needs to format the system partitions when moving between file systems.
- Available flash memory is reduced by approximately 170MB due to the implementation of the Datalight FlashFX file system when compared to older OS versions that did not have the Datalight FlashFX file system.
- "Clean Boot" and "CleanBoot and Clean Application" packages have been updated ("ES400-MC65-CleanBoot&CleanBoot-Blank\_v2.zip") for OS versions containing the Datalight FlashFX flash file system (BSP 2.41.4400 / 3.44.0000 or later). The new packages are compatible with older OS versions as well.
- Users with applications that utilize Microsoft SQL Server Compact 3.5 are advised to update to Service Pack 2 which can be [downloaded from Microsoft](#). Some users have reported that this has resolved a sqlcese30.sys.dll crash in their application.
- The following older software patches that utilized the update loader method to load the patch are not supported on this OS due to incompatibility with the Datalight FlashFX flash file system. These patches should NOT be loaded onto any OS version from 02.41.xxxx or later, or it will result in the device failing to boot and will require the OS to be reloaded using the USB loader recovery method with assistance from Support.
  - o *SPR21310 patch - Removed ability to enter engineering menu from the boot screen by holding down the "w" key while booting and removed ability to Clean Boot the device from the boot screen by holding down the "c" key while booting. [note this fix has been integrated into all ES400 OS versions since -02.41.0400]*
  - o *SPR20095 patch - When using a wired headset, an incoming ring is only heard on the wired headset. [note this fix has been integrated into this OS release]*
  - o *SPR20773 patch - When using a device in a vehicle cradle and the device is completely powered off via the press and hold power button shutdown menu, the device will turn on and boot up when external power is removed from the vehicle cradle. [note this fix has been integrated into this OS release]*
- **Other General Best Practices:**
  - Use Application\Startup folder to load applications not Windows\Startup folder as items in Windows\Startup run very early in the boot process and it is possible for items to start prior to full system resources being available.

- Programmatic Suspend API: PowerPolicyNotify - this is the only suspend API supported. VK\_Off method is not supported.

```
PowerPolicyNotify(PPN_SUSPENDKEYPRESSED, 0);
```

```
PowerPolicyNotify(PPN_SUSPENDKEYRELEASED, 0);
```

- Programmatic Warm Boot API: ExitWindowsEx(EWX\_REBOOT,0); - this is the only warm boot API supported.

- Customer configurations that require a large usage of virtual memory may benefit from a regularly scheduled programmatic warm boot. Frequency of the scheduled warm boot would depend on each customer's usage of virtual memory.

Following can help with specific customer setups:

- Applications such as GPS Mapping where map files are stored on an SD card will require "SD-Card\_HighAvailability mode". This mode retains file handles during suspend and resume of the device so that the SD card is available immediately following a suspend/resume. To enable this mode launch the CAB installer, "RemoveSealedSlot\_SD-Card\_HighAvailability.cab", from the \Windows folder.

## DEVICE COMPATIBILITY

This software release has been approved for use with the following Symbol devices.

Device	Operating System
ES405B	WEHH 6.5.3 Professional

## INSTALLATION REQUIREMENTS

This software package has been approved for use with the following:

- Microsoft Windows 2000 or Windows XP Operating System
- ActiveSync 4.5 or higher.
- If developing applications for Windows Mobile 6.5
- ES405B currently running English Rev A BSP19.1, BSP19.11, MR1 BSP19.103, BSP 31.2, BSP 41.400 and CPLD 13.1



## INSTALLATION INSTRUCTIONS

Copy contents of zip file to SD card or to \Temp folder. Execute StartUpLdr.exe or cold boot terminal by pressing 1 + 9 + pwr and hold the camera key to start the update loader process.

## PART NUMBER AND RELEASE DATE

April 29, 2013

1. 405Bw65XenUL034400.zip
2. 405Bw65XenAB034400.apf